MATERIAL SAFETY DATA SHEET
VERTELLUS SPECIALTIES INC.

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Refined Coal Tar**

Chemical Name: Tar, coal, high-temperature

Synonyms: Roofing Tar, Emulsion Base Tar, Bituvia RT-5, RT-7, RT-10, RT-11, RT-12, RT-240, Driveway Sealer Tar, Driveway Sealer Tar Plus, CP-524, CP-250, Tar Saturant, Cold Ramming Paste

CAS Number: 65996-89-6

Product Use: driveways, roadways, roofing material

Manufacturer Information: Vertellus Specialties Inc.
300 North Meridian Street, Suite 1500
Indianapolis, Indiana 46204 USA

Emergency Phone Number (24 hr.): (317) 247-8141

CHEMTREC Phone Number (24 hr.): (800) 424-9300
(collect calls accepted)

Non-Emergency Phone Number: (317) 247-8141

International CHEMTREC (24 hr.): (703) 527-3887
(collect calls accepted; 011 prefix not needed)

Non-Emergency Fax Number: (317) 248-6413

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Concentration (%)	Exposure Limits	
			OSHA PEL	ACGIH TLV
Refined Coal Tar	65996-89-6	100%	0.2 mg/m^3 as 8-hr TWA (coal tar pitch volatiles)	0.2 mg/m^3 as 8-hr TWA (coal tar pitch volatiles)

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview:

A black, viscous liquid with an aromatic odor. Carcinogen. Toxic. Irritant. Sensitizer (skin). Combustible Liquid (Roofing Tar only).

Signs and Symptoms of Potential Overexposure: Coal tar vapors are irritating to the skin, eyes and respiratory tract. Direct skin contact and/or high vapor concentrations may cause burning and itching, changes in pigmentation, and skin eruptions. Direct eye contact may cause inflammation, discomfort, and conjunctivitis. In general, acute oral toxicity is expected to be moderate, but ingestion is not likely to be a primary route of exposure. Symptoms of systemic poisoning after ingestion include salivation, vomiting, respiratory difficulties, dizziness, headache, loss of pupillary reflex, cyanosis, hypothermia, and mild convulsions.

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Primary Route(s) of Entry: skin contact, skin absorption, eye contact, inhalation, ingestion

Medical Conditions Aggravated by Exposure: Persons with pre-existing skin disorders or central nervous functional illnesses may be at increased risk from overexposure. Exposure to vapors may aggravate pre-existing lung conditions. This is not likely to be a problem when appropriate procedures are used to minimize exposure.

SECTION 4: FIRST AID MEASURES

Skin Contact: Wash exposed area twice with waterless hand cleaner, soap and water, or a mild detergent. Do not use solvents on skin, as they may promote absorption of this material. The exposed area should be examined by medical personnel if irritation or pain persists after washing.

Eye Contact: Rinse eyes immediately with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. GET MEDICAL ATTENTION.

Inhalation: Remove from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. Keep affected person warm and at rest. Give oxygen if respiration is shallow. GET MEDICAL ATTENTION.

Ingestion: If conscious, induce vomiting to prevent further absorption. Give oxygen if respiration is shallow. GET MEDICAL ATTENTION. Do not give anything by mouth to an unconscious person.

Thermal Exposure: Contact with hot tar causes serious burns. GET MEDICAL ATTENTION immediately in the event of exposure to heated tar.

Delayed Effects: none known

Note to Physician: No specific antidote known. Treatment should be based on the judgment of the physician in response to the reactions of the patient.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: 250 - 275°F (194°F for Roofing Tar) **Method:** PMCC (TCC for Roofing Tar) **Autoignition Temperature:** not available

Flammable Limits: **UFL :** not available **LFL:** not available

Flammability Classification (OSHA): Combustible Liquid (Roofing Tar only).

Hazardous Products of Combustion: Toxic vapors may be released upon thermal decomposition (nitrogen oxides, carbon monoxide, carbon dioxide, sulfur dioxide, PAH's).

Potential for Dust Explosion: not applicable

Special Flammability Hazards: Refined coal tar at elevated temperatures may generate vapors that may ignite in the presence of air and a source of ignition. Closed containers may explode when exposed to extreme heat.

Appropriate Extinguishing Media: Water fog, carbon dioxide, dry chemical, foam, sand, steam. Water spray can control unconfined tar fires, but may cause frothing or eruption in closed tanks.

Basic Fire Fighting Guidance: Wear self-contained breathing apparatus and full protective clothing. Skin and eye contact should be avoided. Normal fire fighting procedures may be used.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Containment Techniques: Contain the spilled material using inert solids (i.e., sand, earth, etc.) and, if hot, allow the material to cool. Cooled material may then be shoveled into disposal containers.

Clean-up Procedures & Equipment: Wear protective equipment during clean-up. Remove all ignition sources. Ventilate area of spill or leak. Collect material for later disposal. After collection of product, flush area with water.

Evacuation Procedures: Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Special Instructions: Avoid exposure to hot product during clean up. Ensure thorough decontamination of the release area and clean-up personnel.

Special Reporting Requirements: Notify appropriate authorities if required by regulation.

SECTION 7: HANDLING AND STORAGE

Storage Precautions: Protect containers from physical damage, sparks and flames.

Storage Recommendations: Outside or detached storage is preferable. Maintain dry, ventilated conditions for storage. Containers should be periodically inspected.

Precautions for Unique Hazards: not applicable

Practices to Minimize Risk: Wear appropriate protective equipment when performing maintenance on contaminated equipment. Avoid prolonged or repeated contact with skin or breathing of vapors. Do not smoke or eat in areas where this material is handled. Wash hands thoroughly before eating or smoking. A complete soap and water shower should be taken at the end of each work day. Contaminated clothing should not be reworn until cleaned. Launder contaminated clothing separately from other laundry before reuse.

Special Handling Equipment: Closed system handling of refined coal tar may create excessive vapor concentrations in confined spaces; i.e., tanks, rail cars, tank trailers. Follow appropriate confined space entry procedures when entering any confined space that has been in tar service.

Dangerous Incompatibility Reactions: Keep away from strong oxidizing agents.

Incompatibilities with Materials of Construction: none known

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:	**OSHA PEL:** 0.2 mg/m^3 as 8-hr TWA (coal tar pitch volatiles) **ACGIH TLV:** 0.2 mg/m^3 as 8-hr TWA (coal tar pitch volatiles)
Personal Protective Equipment:	Use NIOSH-approved chemical cartridge respirator with organic vapor cartridges, or any supplied-air respirator as necessary for protection from tar vapors (which contain coal tar pitch volatiles). Wear impervious gloves (i.e., latex rubber), boots, work uniform and safety glasses or chemical goggles. Application of certain protective creams for coal tar products and sunscreens (SPF of at least 15) before and during work may be beneficial in reducing the risk of overexposure.
Respirator Caution:	Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.
Ventilation:	All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.
Other Engineering Controls:	All appropriate engineering controls should be used to minimize exposure potential.
Thermal Hazards:	When handling hot tar (i.e., taking samples), wear appropriate thermal protection equipment and use tongs as needed. Use of chemical goggles or faceshields is highly recommended when handling heated material.
Additive or Synergistic Effects:	Overexposure to this material causes photosensitization of the skin. See sunscreen recommendations above.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Molecular Formula:	a complex hydrocarbon mixture which includes polynuclear aromatic hydrocarbons (PAH's)
Molecular Weight:	not available
Appearance, State & Odor (ambient temperature):	black viscous liquid with a characteristic aromatic odor
pH:	not available
Vapor Pressure:	< 5 mm Hg @ 20°C
Vapor Density (air = 1):	> 1.0
Boiling Point:	> 150°C
Freezing Point:	not available
Melting Point:	not applicable
Solubility in Water:	insoluble to slightly soluble
Specific Gravity or Density:	> 1.1 @ 20°C
VOC Content:	not available
Softening Point:	not applicable
Bulk Density:	9.2 lb/gal for Refined Tar 9.0 lb/gal for Roofing Tar 10.4 lb/gal for RT-10 10.5 lb/gal for Emulsion Base Tar
Octanol / Water Partition Coefficient:	not available
Odor Threshold:	not available

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions to Avoid:	Contact with water can cause frothing or eruption of closed tanks.
Incompatibilities:	strong oxidizers
Hazardous Decomposition Products:	not applicable

Hazardous Polymerization: will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral LD_{50}:	not available	**Species:**	not available		
Acute Dermal LD_{50}:	not available	**Species:**	not available		
Acute Inhalation LC_{50}:	not available	**Duration:**	not available	**Species:**	not available

Skin / Eye Irritation: Mild skin irritant / Mild eye irritant

Target Organs: Skin, possibly lungs, bladder, kidney and central nervous system.

Carcinogenicity: Coal tar pitch volatiles, soots, tars and oils are listed as a carcinogenic category by OSHA, ACGIH, the National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC). Prolonged or repeated contact may lead to dermatitis, and with poor hygienic practices, to more serious skin disorders such as ulcerations, benign skin growths and skin cancer. Some epidemiological studies have suggested that workers exposed to coal tar pitch emissions in Soderberg aluminum manufacturing facilities may have a slightly increased risk of developing lung or bladder cancer. It is important to note, however, that the relevance of these findings to non-Soderberg facilities is currently unknown. Likewise, the relevance of these findings to handling of coal tars, instead of pitches, is currently unknown.

Teratogenicity: No data available.

Reproductive Effects: No scientific study supports an association between refined coal tar exposures and human reproductive hazards.

Neurotoxicity: No data available.

Mutagenicity: Available data characterizes refined coal tar as a mutagen.

Additional Toxicity Information: Overexposures may lead to photosensitization of the skin.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data available.

Environmental Fate: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

US EPA Waste Number: Wastes should be tested to determine if they exceed the threshold for D018 (Benzene).

Classification of Waste as Manufactured: (per federal regulations) Potentially Hazardous
NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations.

Waste Disposal: Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: ***When shipped < 212°F:*** RQ Environmentally Hazardous Substance, liquid, n.o.s., (contains Benzo(a)pyrene & Dibenz(a,h)anthracene, 9, UN3082, PG III.

OR

RQ Other Regulated Substance, liquid, n.o.s., (contains Benzo(a)pyrene & Dibenz(a,h)anthracene), 9, NA3082, PG III.

When shipped > 212°F, but < flash point: RQ Elevated Temperature Liquid, n.o.s., (contains

Benzo(a)pyrene & Dibenz(a,h)anthracene, 9, UN3257, PG III.

When shipped > flash point: RQ Elevated Temperature Liquid, Flammable, n.o.s., (contains Benzo(a)pyrene & Dibenz(a,h)anthracene, 3, UN3256, PG III.

Emergency Guidebook Numbers: **NAERG:** 171 (128 for elevated temperature shipments)

SECTION 15: REGULATORY INFORMATION

OSHA Hazards: Carcinogen. Toxic. Irritant. Sensitizer (skin). Combustible Liquid (Roofing Tar only).

Chemical Inventory Status:

TSCA:	Yes	**EINECS:**	Yes	**Canada:**	Yes - DSL
Japan:	Yes	**Korea:**	Yes	**Australia:**	Yes
China:	No	**Philippines:**	No		

SARA 313:

Naphthalene (CAS #: 91-20-3)	approx. 8%
(NOTE: Driveway Sealer Tar and Driveway Sealer Tar Plus contain < 3% naphthalene.)	
Phenanthrene (CAS #: 85-01-8)	approx. 4.2%
Anthracene (CAS #: 120-12-7)	approx. 1.2%
Biphenyl (CAS #: 92-52-4)	approx. 1%
Styrene (CAS #: 100-42-5)	approx. 0 - 0.1%
Polycyclic Aromatic Compounds (PAC's)	approx. 3.5%

Other Regulatory Listings: WHMIS Classification:
Class D Division 2 Subdivision A: Very Toxic Material.
Class D Division 2 Subdivision B: Irritant
Class D Division 2 Subdivision B: Sensitizer
Roofing Tar only: Class B Division 3: Combustible Liquid

Reportable Quantities: Approximately 250 - 286 lbs. (27 – 31 gallons) based on content of benzo(a)pyrene.

State Regulations: MA Haz Substance
CA Prop 65: Contains chemicals known to the State of California to cause cancer.

SECTION 16: OTHER INFORMATION

Precautionary Statement: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

Vertellus Hazard Rating System:
(Based largely on HMIS and NFPA systems) **H:** 3* **F:** 1 **R:** 0

Revision Date: 02 October 2002 **Original Date of Issue:** 1985

Revision Details: Revised Sections 12 & 14.